



## Model H-500-XL

Data Collection Platform (DCP)

The **WATERLOG**® Model H-500-XL is a data logger designed for remote operation. This instrument can be interfaced with:

- Other Data Loggers
- GOES Transmitter
- Remote Displays
- Telemetry Systems
- Modems
- Variety of Sensors



### KEY FEATURES

- Ideal for small Hydrologic/Met Stations
- Built-in key pad and easy-to-read display can be used for complete system configuration or to view measured values
- External button allows simplified means to view current data values
- Three RS-232 Serial Ports for use with local terminals, modems, GOES Radios, remote displays, etc.
- Four analog inputs
- SDI-12 Master mode
- Two programmable digital inputs/outputs
- One event counter input (Tipping Bucket Rain Gauge)
- Frequency input (wind speed)
- Quadrature shaft encoder input
- Scalable and programmable 4-20 mA Output
- Data logging capability using nonvolatile internal storage (4 Meg and up)
- Sealed, corrosion-resistant, nonconductive enclosure
- Operating temperature range of -40 to 60°C

# SPECIFICATIONS

## Performance

### General Analog Input

Channels:	4 (Single Ended)
Ranges:	Programmable (Channel 1 Only)
Resolution:	16-Bit Resolution (1 Part in 65536)
Accuracy:	±0.01% FS
Input Ranges:	0 to 5 Volts (All Channels) 0 to 500 mV (Additional Input Range Only Available on Channel 1)

### Excitation

5.0V Switched, Ratiometric with  
10mA (max load)

### Accuracy

± 1.0 mV Over Load and Temperature Range

### Frequency Input

Input Range:	1-10 KHz at ±75mVolts or greater 1-15 KHz at ±1Volt or greater
Input Amplitude:	± 5.0 Max
Accuracy:	± 0.1%
Resolution:	1/10000 * Reading

### Counter Input

Type:	Switch closure or voltage pulse, Internal 50k pull up resistor, falling edge triggered.
Input Voltage:	0-5 Volts
Minimum Pulse Width:	5 mS
Input Frequency:	100Hz (max)

### Digital I/O

Channels:	2, Independently configured for input or output
Input Voltage:	0-5 Volt
High Level:	3.5 V (min)
Low Level:	0.8 V (max)

### Output Voltage

Low:	0.4 V (max)@ -5mA
High:	3.5 V (min)@+5mA

### 4-20 mA Output

Resolution:	4.0µA
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### Data Storage

Type:	Non-Volatile FLASH
Size:	4 Mega Byte Minimum (Expandable)

## Interface

### SDI-12

	SDI-12 Master Mode
Protocol:	SDI-12, 7-bit even parity, 1 stop bit
Baud Rate:	1200

### RS-232

Protocol:	3 RS-232 Communication Ports RS-232, 8-bit, no parity, 1 stop bit
Baud Rate:	Programmable

## Mechanical Data

### Physical

Enclosure:	Sealed, corrosion resistant fiberglass with clear Lexan® window
Size:	7.0 in. wide x 8.5 in. long x 4.3 in. deep
Weight:	4.25 lbs
Mounting:	Hardware supplied for wall mounting

### Power

Input Voltage:	10.0 to 16.0 Volts
Input Current:	Sleep Mode: 4mA typical Active: 80 mA average (measuring, display off) Active: 350mA average (measuring, display on) Auto display shut-off after 5 minutes

## Environment

### Temperature

Extended Operating Range:	-40 to 60°C
Storage:	-40 to 80°C

### Humidity

0-95% non-condensing

## Miscellaneous

### Options

Data Logging:	Data is stored internally to Nonvolatile Memory
GOES:	H-222-SE (Signal Engineering) or H-222 (Telonics)

### Accessories (Supplied)

Cables/Connector:	- 9-pin D connector cable required for RS-232 communication available (H-350-RSC) - 9-pin D Male to Male Gender Changer - RS-232 Null Modem Adaptor - Sensor Terminal Block
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### Warranty

The **WATERLOG®** H-500-XL is warranted against defects in materials and workmanship for one year from date of shipment.

### Note

Specifications subject to change without prior notice due to ongoing commitment to product testing and improvement.  
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